



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Cheng-Lien Chiang
Assignee: Bridge Semiconductor Corporation
Title: OPTOELECTRONIC SEMICONDUCTOR PACKAGE DEVICE
Serial No.: 10/082,500 Filed: February 25, 2002
Examiner: Chu, C. Group Art Unit: 2815
Atty. Docket No.: BDG005-3

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION FOR WITHDRAWAL OF DRAWING OBJECTION
FOR MISSING FEATURE IN CLAIM 11**

Dear Sir:

This Petition is filed under 37 C.F.R. § 1.181 to request that the outstanding requirement to correct the drawings for a missing feature in claim 11 under 37 C.F.R. § 1.83(a) be withdrawn.

I. FACTS

The captioned-application discloses an optoelectronic semiconductor package device and its method of manufacture.

The method includes providing semiconductor chip 110 that includes upper surface 112 and lower surface 114, where upper surface 112 includes light sensitive cell 115 and conductive pads 116 (Specification, page 8, lines 5-11 and Figs. 1A and 1B), providing metal base 120 that includes surfaces 122 and 124, central portion 126, slots 128, recessed portions 132 and 134, non-recessed portions 136 and leads 138 (Specification, page 9, lines 8-17 and Figs. 2A and 2B),

forming metal traces 144 on metal base 120, where conductive traces 150 include leads 138 and metal traces 144 (Specification, page 11, lines 6-11 and Figs. 3A and 3B), forming transparent adhesive 154 on metal base 120 and metal traces 144 (Specification, page 12, lines 21-22 and Figs. 4A and 4B), mechanically attaching chip 110 to metal base 120 using transparent adhesive 154 (Specification, page 13, lines 5-6 and Figs. 5A and 5B), forming encapsulant 156 on chip 110 and metal base 120, where encapsulant 156 includes bottom surface 160, peripheral side surfaces 162, top surface 164 and peripheral portion 166 (Specification, page 14, lines 3-4 and page 14, line 30 to page 15, line 1 and Figs. 6A and 6B), removing encapsulant 156 from laterally extending portions of slots 128 (Specification, page 15, lines 22-23 and Figs. 7A and 7B), forming protective coating 170 on metal base 120 outside encapsulant 156 (Specification, page 16, lines 9-10 and Figs. 8A and 8B), removing central portion 126 of metal base 120, thereby exposing metal traces 144 and transparent adhesive 154 (Specification, page 17, lines 7-8 and 12-13 and Figs. 9A and 9B), forming openings 176 in transparent adhesive 154 that expose pads 116 (Specification, page 18, lines 7-9 and Figs. 10A and 10B), forming connection joints 180 in openings 176 that contact and electrically connect pads 116 and metal traces 144 (Specification, page 18, line 28 to page 19, line 2 and Figs. 11A and 11B), forming transparent base 182 on the structure, where encapsulant 156 and transparent base 182 in combination form insulative housing 184 that surrounds and encapsulates chip 110 (Specification, page 20, lines 3-4 and 20-21 and Figs. 12A and 12B), singulating optoelectronic device 186 from the lead frame (Specification, page 21, lines 1-2 and 6-7 and Figs. 13A and 13B), and bending leads 138 (Specification, page 21, lines 18-20 and Figs. 14A and 14B).

Claim 11 recites “a conductive trace that extends through an opening in the first housing portion.”

The Office Action dated April 10, 2003 did not object to this feature.

The Office Action dated July 31, 2003 objects to the drawings under 37 C.F.R. § 1.83(a) since the limitation in claim 11 “a conductive trace that extends through an opening in the first housing portion” is not shown in the drawings.

II. ARGUMENT

The conductive trace is illustrated as conductive trace 150 that includes lead 138 (Fig. 2A) and metal trace 144 in Fig. 3A. In addition, lead 138 is shown in the enlarged cross-sectional view in Fig. 2H, conductive trace 150 that includes lead 138 and metal trace 144 is shown in the enlarged cross-sectional view in Fig. 3E.

The first housing portion is illustrated as encapsulant 156 in Figs. 6A and 6B. In addition, encapsulant 156 is shown in the enlarged cross-sectional view in Fig. 6D.

Metal base 120 includes central portion 126, slots 128 and recessed portions 132 and 134 in Fig. 2B. The combination of slots 128, recessed portions 132 and recessed portions 134 provide a continuous rectangular channel that is adjacent to and extends 360 degrees around central portion 126, and slots 128 provide comb-like canals that extend outwardly from the channel (Specification, page 9, lines 21-24).

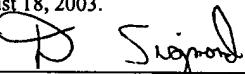
Encapsulant 156 includes bottom surface 160, peripheral side surfaces 162, top surface 164 and peripheral portion 166 in Figs. 6A and 6B. Encapsulant 156 fills slots 128 and recessed portions 132 and 134. That is, since slots 128 and recessed portions 132 and 134 form a continuous rectangular channel with outwardly extending comb-like canals, and encapsulant 156 enters slots 128 and recessed portions 132 and 134 under pressure, encapsulant 156 fills and assumes the shape of the channel and canals. (Specification, page 14, lines 22-26.) Encapsulant 156 contacts the bottoms of recessed portions 132 at surface 122, the outer edges of recessed portions 132 at slots 128, and the tops of recessed portions 132 at surface 124, thereby forming lateral openings with sidewalls that contact and span 360 degrees around leads 138. As a result, encapsulant 156 interlocks leads 138, thereby enhancing the mechanical attachment between chip 110 and leads 138. (Specification, page 15, lines 10-14.)

As a result, lead 138 extends through an opening in encapsulant 156, as shown in Figs. 6D, 7D, 14A and 14B. Although the opening is not labeled, its identification is sufficiently clear from Figs. 6D, 7D, 14A and 14B.

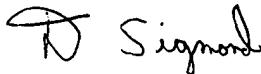
Furthermore, it would difficult to label the opening in the existing drawings since lead 138 extends through the opening as soon as encapsulant 156 is formed. An additional drawing such as a cross-sectional view showing Fig. 6D as viewed from left-to-right that shows lead 138 extending through the opening in encapsulant 156 would be redundant and unenlightening and unnecessarily clutter the captioned-application with another figure showing a feature that is shown elsewhere.

Therefore, Applicant requests that this objection be withdrawn.

Please charge any fee due under this Petition to Deposit Account No. 502178/BDG005-3.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 18, 2003.	
 _____ David M. Sigmund Attorney for Applicant	<u>8</u> , <u>18</u> , <u>03</u> Date of Signature

Respectfully submitted,



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